

WHAT IS CLAIMED IS

1. A resist film forming method including a resist coating step, comprising steps of:

rising by a capillary phenomenon a coating liquid
5 stored below the coating surface of a substrate held facing-downward;

bringing the rised coating liquid into contact with the coating surface via a nozzle; and

scanning the nozzle along the coating surface of the substrate thereby coating the resist film on the coating
10 surface of the substrate,

wherein said method further including a step of drying the coated resist film by moving the substrate at a predetermined speed with the coating surface of the
15 substrate facing downward.

2. A resist film forming method as set forth in claim 1, wherein the resist film is coated by moving the substrate so as to scan the nozzle along the coating surface of the substrate and the
20 coated resist film is dried by moving the substrate to the opposite direction by turning back the way the substrate has been moved for resist coating.

3. A resist film forming method as set forth in claim 2, wherein
25 the predetermined speed is 1.5 m/min or lower.

4. In a photomask manufacturing method, the improvement wherein the resist coating step comprising a step of

rising by a capillary phenomenon a coating liquid
5 stored below the coating surface of a substrate held facing-downward;

bringing the risen coating liquid into contact with the coating surface via a nozzle; and

scanning the nozzle along the coating surface of
10 the substrate thereby coating the resist film on the coating surface of the substrate,

wherein said method further including a step of drying the coated resist film by moving the substrate at a predetermined speed with the coating surface of the substrate facing downward.

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5. A photomask manufacturing method as set forth in claim 4, wherein the resist film is coated by moving the substrate so as to scan the nozzle along the coating surface of the substrate and the coated resist film is dried by moving the substrate
20 to the opposite direction by turning back the way the substrate has been moved for resist coating for drying the coated resist film.

6. A photomask manufacturing method as set forth in claim
25 5, wherein the predetermined speed is 1.5 m/min or lower.

7. A resist film forming method as set forth in claim 3, wherein the predetermined speed is ranging from 0.01 to 0.08 m/min.